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ON  
INSURANCE AND CREDIT FOR SUSTAINABLE  
FISHERIES DEVELOPMENT IN ASIA**

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**FISHERY INSURANCE AND CREDIT PRACTICES IN BANGLADESH**

Md Liaquat Ali  
Department of Fisheries  
Bangladesh

**INTRODUCTION**

Bangladesh with a total area of 1,43,999 square kilometers is a low lying country, relatively flat, comprising the deltaic plain of the Ganges, the Brahmaputra, the Meghna river systems. The country is covered with a network of rivers and canals forming a maze of interconnecting channels.

The contribution of fisheries to the economy of Bangladesh is substantial particularly with reference to food consumption, nutrition, employment and export. This sector contributes 4.7% to the national GDP, 7.0% to the agricultural GDP and 10% of the export earnings. Fish provides 70-80% of animal protein in the diet of people in the country. Per capita annual fish consumption is 10kg. The average annual rate of growth of the fisheries sector over the years is 4.6% .

Fisheries sector provide part-time and full-time employment in primary, secondary and tertiary fishery related activities. These activities include fishing, aquaculture, fish trade, fish processing, manufacture of fishing gears and fishing implements etc. Fisheries sector provide full-time employment for 1.2 million professional fishermen and 11 million part-time fisherfolk which is about 10% of the total populatin.

**NATIONAL GOALS**

The Government of Bangladesh recognizes the importance of the fisheries sector with the following objectives :

- a) To increase fish production and to improve nutritional standards.
- b) To expand employment opportunities in fisheries and ancillary industries.
- c) To improve the Socio-economic conditions of the fisherfolk, fish farmers and others engaged in this sector.
- d) To increase exports.
- e) To improve environmental conditions and public heath.
- f) To increase GDP.

These national goals are in consistent with the development plans of the country. They will require

expanded use of aquaculture technology, increased investment, efficient institutions, proper management of resources, policy reforms.

## **FISHERIES DEVELOPMENT STRATEGY**

The key elements of the national fisheries development strategy are as follows :

- a) Inland fisheries should be given highest priority for development, promotion, conservation and management programmes.
- b) Public sector to provide infrastructure facilities to the private sector to stimulate private sector investment.
- c) Fisheries institutions should improve skills through education, training and resource mobilization.
- d) NGOS should be given opportunity and encouraged to organize fishermen and provided with access to fisheries resources.
- e) special credit programme should be set up through NGOS and Grameen Bank to cater the credit needs of fisherman.
- f) Shrimp Culture area to be developed and quality seed should be made available.
- g) Extension and training activities strengthening for expansion of Shrimp Culture.
- h) Credit programmes for improved extensive and semi-intensive Shrimp Culture.
- i) Functional credit programmes on easy terms and conditions for the fisheries sectoral development.

## **FISHERIES RESOURCE AND PRODUCTION POTENTIAL**

The fisheries resources of Bangladesh are among the richest in the world and the inland fisheries production still ranks fourth in the world only after China, Indonesia and India.

The country has vast water resources in the form of river, canals, estuaries, floodplains, depression (Beels), Ox-bow lakes, reservoir, ponds, shrimp farms in the coastal area and marine waters in the Bay of Bengal with high potential of fish production. The water bodies are classified into different categories based on the fish production regime and ecological consideration. An account of the waterbodies along with area and production of fish is furnished in table-1 (Annexure-1):

Inland waters are inhabited by 260 native species, 13 exotic species of fish and 20 species of shrimp. The marine water is inhabited by 475 species of fish and 36 species of shrimp.

Long-term fish production potential and growth prospects and fish production projection area and average yield for different types of fisheries by the year 2010 are furnished in table-2 (Annexure-1), table-3 (Annexure-2) and table-4 (Annexure-3).

### **Inland Openwater Fisheries**

Inland openwater fisheries comprises of the fisheries in the river, canals, estuaries, depression (beels) & seasonal floodplain covering an area of 4.03 million ha. Fish production in the openwater is self sustaining and self reproducing.

Historically, inland open waters were the major source of fish production in the country. The inland open water fishery resource contributed about 90% of the country's fish production in the 1960s, but due to man-made causes like overfishing in the absence of fisheries management and conservation measures; implementation of flood control and drainage project, use of insecticides in the rice field, fish production in the inland open water, particularly in the rivers and floodplains has declined significantly during the last three decades. The contribution of the country's fish production has continued to drop down to about 50% until late eighties. However, the production showed a very slow increasing trend since 1990.

200000 ha. Shrimp culture in enclosed area (Gher) along with rice by trapping shrimp juveniles in the coastal region is an age old practice. With high demand and attractive price of shrimp in foreign market, shrimp farming in coastal area has expanded rapidly along with improvement of the culture methodology.

At present about 136000 ha area is under shrimp culture in the coastal area of Bangladesh. Culture practice is by selective stocking of *P.monodon* fry collected from natural waters. Culture practices are traditional (6%), extensive (70%) and improved extensive (23%), semi-intensive (1%). Average per hectare production is 250kg with maximum of 500-600 kg/ha. Recently semi-intensive shrimp farming has been introduced in a very small area. Presently about 1300 ha. farm area is under semi-intensive culture. Production in some semi-intensive farm is as high as 6-9 ton/ha. The shrimp farming is almost entirely dependant on wild seed which cannot meet the demand for culture. Eight *monodon* hatcheries have been established in the country of which three started production. Shrimp culture was gradually developing but recently viral disease has created havoc in shrimp farming. Both extensive and semi-intensive farms have been affected by the disease and causing severe loss to the farmer.

Shrimp farming development need public and private sector investments together with credit delivery and risk coverage through insurance.

### **Marine Fishery**

Marine fishery includes both Industrial and Artisanal fisheries. Bangladesh has a Coastline of 480 km in length and its territorial limit is 12 nautical miles measured seawards from the coastline. The continental shelf covers an area of around 66000 km<sup>2</sup>. About 3700 km<sup>2</sup> of the continental shelf is under 50m depth zone and this area has good resources of fish. Bangladesh has an exclusive economic zone (EEZ) of 1,42,00 km<sup>2</sup> which extends 320 km (200 N miles) from the baseline.

Standing stocks of marine resources were estimated from time to time. The estimated stock shown in table-5 (Annexure-4).

Industrial fisheries consist of fishing by Trawler beyond 40m depth. Artisanal fishing by mechanized and non-mechanized boat is undertaken in the coastal water upto 40m. depth. At present 56 trawlers, (45 shrimp trawlers and 11 fish trawlers) are being operated in the marine water harvesting 4-5 thousand tons of shrimp, 10-15 thousand m.ton fish of commercial importance and about 35-40 thousand ton trash fish. Trash fish is discarded in the sea. There are about 8000 mechanized and 14000 non-mechanized boats operating in the coastal waters. Annual catch from the artisanal fisheries is 23 thousand tons of shrimp and 227 thousand tons of fish. Based on the available information about the stock in the Bay of Bengal the resource is being exploited almost at the maximum sustainable level. Information about the resources in the Bay particularly about the pelagic fish is quite inadequate. Deep sea resources has not been explored and exploited. With proper assessment of the pelagic resources in Bay of Bengal, production can be increased.

### **Fish Processing and Export**

#### *Fish Processing*

Bangladesh has developed a very impressive sea food processing and freezing industry during the last 15 years. The fish processing plants in Bangladesh are mainly engaged in processing and freezing of exportable shrimps, and fish. The fish processing plants established during recent years are of International Standard. Out of 97 processing plants in the country, only 5 are being operated under the Public Sector. Most of the plants are below capacity utilization for want of raw materials.

Fish processing industry need Credit investment, Credit liberalisation and insurance programmes.

#### *Fish Export*

Export of Shrimp, Fish and other fishery products was non-conventional. It has increased many-folds during the last decade earning more and more foreign exchange to minimise the national balance

The fishing community harvesting in the openwater fisheries do not have access to institutional credit due to lack of collateral and complexity of credit disbursement. Strategies for development and management of inland openwater fisheries in Bangladesh :

1. Conserve and protect the fish habitat from environmental and ecological degradation.
2. Conserve the fisheries resources through implementation of fish conservation and protection law.
3. Conserve the fisheries resources through maintaining fish sanctuaries in suitable area.
4. Enhancement of fish production and replenishment of depleted stock through stocking programme.
5. Establishing link canal, fish pass in flood control area.
6. Biological management of the fisheries.
7. Credit facilities to the fishermen for purchasing net, boat, etc..

### Fresh Water Aquaculture

Manmade pond, ox-bow lakes and other closed water bodies are very suitable for aquaculture. There are 1.3 million ponds covering an area of 0.15 million ha. Ponds are classified into three categories according to culture status.

Sl.No.	Culture status	Percentage by area
1.	Cultured	52%
2.	Culturable	31%
3.	Derelict	17%

Fish ponds in Bangladesh have the following attributes;

- About 86% have a perennial water supply.
- More than 95% have water about 5 feet deep during monsoon months.
- Multiple uses : Mainly washing and bathing (63%), fishing (25%), irrigation 7% and other purpose (5%).
- Jointly owned (60%).
- Ponds used for culture purposes were due to lack of finance (68%), Joint ownership (18%), low profitability (17%).
- Culture Practice : Traditional, Extensive, Improved Extensive, Semi-intensive.

Indian major carp and Chinese carps comprise the major culture species. Other species are the Tilapia (*Oreochromis nilotica*), African magur (*Clarias garipineus*), Thai Sharputi (*Puntius gonionotus*) etc.. Recently, Fresh water Shrimps (*Macrobrachium rosenbergii*), are being cultured in ponds with carps. Through adoption of improved technology and introduction of fast growing species aquaculture production in pond has rapidly increased over the last 12 years at an average rate of 12%. Average production per ha. at present is 1.9 ton with a maximum of 11 tons per ha. Commercial entrepreneurship are growing in aquaculture.

Commercial aquaculture needs investment and risk coverage through credit and insurance.

### Coastal Aquaculture

Shrimp farming is the main activity in the coastal area. The area suitable for shrimp culture is about

of trade which was Tk. 1342 million contributing 9.12% of the total export during 1995-96.

Credit and insurance is an important issue for export of value added products.

## **INVESTMENT OPPORTUNITIES AND CREDIT PROGRAMME IN THE FISHERIES SECTOR**

### **Investment opportunities in the fisheries Sector**

Investment in the future are to be directed towards the improvement of water resource utilization through the intensification of aquaculture, particularly semi-intensive aquaculture in ponds. Strategic investments are needed in infrastructure and institutions. The investment supports should be directed toward the continued development of private sector. The specific investment opportunities lie in :

- Modernization and improvement of extension and credit.
- Establishment of private sector hatcheries.
- Small scale private sector ice-plants.
- Development of trained technically skilled man-power.
- Crop insurance.
- Communication linkage.
- Development and management of openwater bodies

### **Credit Programmes**

Institutional financing has a definite role to play in accelerating the pace of development in the fisheries sector. Institutional credit for the fisheries sector is provided by two specialized Govt. owned Banks, four commercial Banks. More-over, Grameen Bank, Bangladesh Samabaya Bank Ltd, Bangladesh Rural Development Board and NGOs also provide credit support in the Fisheries sector.

Fisheries Credit disbursement share in total agricultural credit disbursement is relatively low i.e. 1.6% and its recovery rate is also low i.e. 20%.

Fishermen usually ineligible for institutional credit for lack of collateral depend on such non-institutional sources as relatives, friends, suppliers and fish traders. Fish traders charge high rates of interest (an estimated 10% to 20% a month) and often require the borrowing fishermen to :

- (a) Rent essential fisheries equipment (Boats nets etc.).
- (b) Sell fish at lower than market rate.

Government of Bangladesh under New Fisheries Management policy provided collateral free Credit to the fishermen and the rate of recovery is not satisfactory. In spite of high rate of interest in the informal credit the recovery rate is satisfactory.

Technological development in recent years have added dependence on monetized inputs thereby pushing up capital requirements. However, credit disbursement to the fisheries sector have seriously declined since the volume of loans in areas is steadily growing.

Bangladesh bank is recently implementing a new credit guarantee scheme for the fisheries sector without any collateral. Implementation of such credit programme need intensive supervision which involves cost subsidization and can not be replicated throughout the country. Similar credit programme with DANIDA assistance being implemented.

Under free-economic policy directed credit to the particular sector or sub-sector has recently deregulated by the Govt.

### **Constrains in credit delivery**

The general experience with credit for small-scale aquaculture and fisheries programmes in Bangladesh

have been rather negative in terms of loan disbursements, utilization and loan recovery. Factors responsible for this are :

1. Reluctance on the part of financial institution to disburse loans without the borrower providing immovable assets as primary collateral.
2. Existence of gift /grant character of loan programmes where Capital subsidy components, subsidized interest rates and the "writing off" of fisheries loans has resulted in the deterioration of loan repayment motivation and discipline.
3. Social interference in the selection of borrowers by locally elected bodies, which often result in people recovering loans who are neither able nor willing to use the loans for the intended purpose.
4. Inadequate technical extension services.
5. Lack of trained branch level staff for appraisal of loan applications and loan supervision.
6. Complicated procedures and requirements for obtaining a loan which often keeps those who most need it away.
7. Normal credit programme not linked with insurance.

## INSURANCE POLICY IN BANGLADESH

### Technology based Fisheries (Shrimp Farm) insurance policy

Bangladesh is a disaster prone country. This makes both pond culture in inland areas as also shrimp culture in the coastal areas a rather risky venture. The Sadharan Bima Corporation along with live-stock and crop insurance introduced insurance programme for shrimp culture projects. There is no insurance programme for fish farming.

### *Main features of Fisheries (Shrimp) insurance policy*

1. **Risk:** This policy will cover risks due to flood, tidal bore, cyclone, sudden surcharge of water.
2. **Types of assets :**
  - Prawn/Shrimp stock in the pond.
  - Prawn/Shrimp juvenile/Fry .
  - Dykes/Embankment.
  - Shrimp/Prawn feed and fertilizer stock at project site.
  - Building and godown.
3. **Premium:** For every culture period the Premium to be charged @ 0.99% of the insure amount. This rate shall be applicable for three seasons.
4. **Access:** Under this policy 20% of the loss shall be borne by the policy holder against feed/seed/Shrimp excepting any loss against other assets.
5. **Assessment of loss :** Any liability is subject to terms and conditions of this policy be assessed jointly by a representative of the corporation, a representative of the insured, a representative of the prawn culture project association and a representative of the concerned district prawn culture committee.

Claim if admitted will be settled on the basis of the assessed loss in the following manner :

Stage of production	Sum insured (Price of Larvae plus price of feed consumed)
1. First Stage	Value of released larvae plus value of one month's feed.
2. Second Stage	Value of Larvae plus value of Two month's feed.
3. Third Stage	Value of Larvae plus value of Three month's feed.
4. Fourth Stage	Value of Larvae plus value of Four month's feed.

6. **Culture Period** : The duration of each culture period will be 120 days from the date of release of the Larvae into the stocking pond. However the policy will remain valid for another 30 days for harvesting in case of delay caused by erratic behavior of the Sea.
7. **Determination of Policy amount**: Insurance Policy amount shall be fixed in accordance with the market price of shrimp feed and price list of feed and other inputs supplied by the concerned company's.
8. **Policy approval**: Every policy proposal shall have to be submitted to the H.Q. through Branch offices for approval.

### **Fishery Vessel Insurance Policy**

Both Public and Private Sector insurance company provide Institute Fishery vessel Insurance Policy. Premium rate of Coastal and Inland mechanized fishery vessel is higher than off-shore and Inland trawlers. Considering the operational life of mechanized fishing vessel owner's are reluctant or not interested to insure mechanized vessel.

Institute Fishing vessel insurance is subject to English law and practices. Insurance Policy Covers loss or of damage to the subject matter caused by

- Perils of the seas, rivers, lakes or other navigable waters.
- Free expulsion.
- Violent theft by persons from outside the vessel.
- Jettison
- Piracy
- Breakdown
- Contract with equipment and installations.
- Accidents in loading, discharging or shifting catch, fuel stores.
- Bursting of boilers, breakage of shafts or any other latent defects in the machinery or hull.
- Negligence of repairs.

The following changes shall be paramount and shall override anything contained in this insurance inconsistent there in

#### **\* War exclusion**

In no case shall this insurance policy cover loss damage liability or expense caused by

- a) War, Civil war, revolution, rebellion, insurrection or Civil strife arising therefrom or any hostile act by or against belligerent powers.
- b) Capture seizure arrest restraint or detainment and the consequences there or any attempt there at
- c) Derelict mines, torpedoes, bombs or other derelict weapons of war.

#### **\* Strikes exclusion**

In no case shall this insurance policy cover loss damage liability or expense caused by

- a) Strikes, locked out Workmen or persons taking part in labour disturbances, riots or civil commotions
- b) Caused by any terrorist or any persons acting from a political motive.

**\* Malicious acts exclusion**

In no case shall this insurance cover loss damage liability or expense arising from

- a) The detonation of an explosive
- b) Any weapon of War and caused by any person acting maliciously or from political motive.

**\* Nuclear exclusion**

In no case shall this insurance cover loss damage liability or expense arising from any weapon of War employing atomic or nuclear fission and or fusion or other like reaction or radioactive force or matter.

**Livestock Insurance in Bangladesh**

Sadharan Bima Corporation has introduced Livestock/Cattle Insurance as a Pilot scheme since 1981. Cattle insurance is voluntary in Bangladesh. Now insurance coverage is allowed only to the project financed by Bangladesh Krishi Bank and Commercial Banks.

- a) *Purpose of the scheme:*
  - (i) To indemnify the farmer in the event of loss of cattle due to death by disease or accident only.
  - (ii) To undertake research necessary for promotion and development of live stock insurance in the country.
- b) *Period of Insurance : One year*
- c) *Animals covered and rate of premium:*

Sl.No.	Name of animal	Rate of Premium
1.	Bull and Ox	3.5%
2.	Cow without breed	4.0%
3.	Cow with breed	4.5%
4.	Heifer only	5.0%

- d) *Limit of cover and indemnity:*
  - (i) The liability of the Company in respect of any animal does not exceed the sum insured or the market value of the animal whichever is less.
  - (ii) Insurance coverage is not allowed to the cattle below the age of 6-7 months and older than 10 years.
  - (iii) Risk is not covered where (a) Disease contacted prior to commencement of risk. (b) Disease contacted within 15 days from the date of commencement of risk.
- e) *Claims:*
  - i) Insurance Company must be informed within 24 hours in the event of accident or disease of any insured cattle.
  - ii) Information as required by the insurance Company must be furnished within 14 days



- iii) Veterinary certificate as proof of death of cattle and value of the cattle to be furnished to the company.
  - iv) The insured shall dispose of the Caracas to the best advantage and amount realized shall belong to the insurance company.
- f) *Benefits of Livestock insurance:*
- Protection to the farmers against loss of their Livestock.
  - Raises credit worthiness of the farmers.
  - Reduce incidence of animal death.
  - Encourages cattle Breeding and Dairy Industries.
  - Helps prompt treatment or replacements of animals.
- g) *Problems for smooth functioning of Livestock insurance:*
- Lack of Livestock mortality data.
  - Inadequate veterinary services.
  - Poor animal husbandry practices.
  - High mortality.

### **Crop Insurance in Bangladesh**

Crop insurance in Bangladesh has been in operation on a Pilot basis by Sadharan Bima Corporation. Crop insurance linked up with agriculture credit.

- a) *Objectives of Crop Insurance Programme:*
- i) To minimize risk of the farmers against crop loss due to natural hazards.
  - ii) To save the farmers from indebted loss leading to panporization.
  - iii) To induce farmers to adopt improved cultural practices to raise productivity of loan.
  - iv) To improve position of credit giving agencies by linking credit with insurance.
  - v) To introduce measure to rectify the constraints of Pilot scheme
  - vi) To introduce area approach to reduce administrative and operational cost.
  - vii) To expand coverage on nation wide basis.

### **Conditions for Crop insurance policy**

1. The Policy holder shall abide by the instructions given by the insurer. Otherwise unwanted loss shall be the liability of the policy holder.
2. The Policy holder must properly store preventive medicines, fertilizer etc.
3. The Policy holder must inform sowing and seedling plantation dates in writing to the insurance company.
4. The insurance company shall not take any risk under the policy unless at least 75% of the seed/seedlings sown or planted germinate or grow on the unit.
5. On the happening of any loss or damage the insured shall give immediate notice of such damage to the Corporation and must not harvest the crop unless the Corporation's Inspection/ Authorised representative visits the affected crop.
6. The insurable acreage which would constitute an Insurance unit will generally consist of each society/project/farm.
7. The policy will be subject to a limit of indemnity upto the agreed sum assured as incorporated in the policy which shall be restricted to the investment value of the crop and growing season.